The End of a Global Pox: America and the Eradication of Smallpox in the Cold War Era by Bob H. Reinhardt (review)

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middle-aged male doctors who injected themselves. If doctors' wives and nurses also figured prominently, they never constituted a majority.

It follows that either there was something different about the United States or, as Kragh tentatively suggests, "the proportion of [U.S.] female morphinists has been overemphasized" (p. 192). I think the first hypothesis likelier. Several American studies indicated female majorities. They drew on reasonably large surveys of physicians and pharmacists, who knew the identities of institutionalized as well as noninstitutionalized addicts. They were consistent, placing the female percentage in the 60 to 70 percent range in the 1870s and 1880s. The easy availability of narcotized home remedies and patent medicines put ailing women at risk, as did fierce competition among often poorly trained physicians. The higher proportion of female morphine and medicinal-opium addicts in the United States, together with the higher overall rate of iatrogenic addiction, seems another sign of the relatively backward state of nineteenth-century American medicine.

Denmark did resemble the United States in one important respect. When narcotic addiction finally gravitated from isolated professionals to an underworld subculture, the government cracked down, enacting punitive legislation in 1955. Alexandre Marchant shows that France followed suit with its own drug war in 1970, after LSD, marijuana, and heroin caught on with the young, especially those involved in the counterculture. While most narcotic users were male, sensational stories of strung-out *jeunes femmes,* "old and dying" (p. 204) in their twenties, had the greatest impact on public opinion.

Would French tabloid readers have reacted similarly to middle-aged prostitute-addicts? Though the book highlights gender, Marchant and other contributors ultimately make a case for the demographic complexity of pharmacological politics. When drugs threaten the health, morality, or class status of the young, they provoke particularly strong responses. Doctors, for example, initially hesitated to prescribe contraceptive pills to unmarried teenagers, who seemed likelier to behave promiscuously (and to contract venereal diseases) than older, married women with children. Gender matters, but so do age, marital status, class, and sociocultural mobility, particularly of the downward variety.

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Bob H. Reinhardt. *The End of a Global Pox: America and the Eradication of Smallpox in the Cold War Era.* Chapel Hill: University of North Carolina Press, 2015. xvi + 268 pp. Ill. $39.95 (978-1-4696-2409-9).

For thirty-five years, mentioning a lesson from smallpox eradication has sometimes been followed by, "But smallpox eradication was easy." This book provides a more

factual account. The author has done an amazingly detailed review of documents and related materials on the program origins.

He gives deserved credit to the Soviet Union for promoting the program and highlights early resistance from the United States. When first proposed in 1953 by WHO, only France, Uruguay, and Panama supported the idea. The United States argued it was too difficult. So, the World Health Assembly (WHA) voted to undertake malaria eradication!When finally accepted, in May 1965, by the WHA, the United States changed its opposition to become a strong supporter and funded, through USAID, a program administered by CDC, to eliminate smallpox in nineteen African countries. The five-year goal was met in three and a half years, under budget, to become a model for other countries.

The author provides a rich litany of the many barriers, from the virus itself to social factors, climatic impediments, communication and transportation challenges, and no end of political obstacles stretching from USAID through national and local African structures. But it was done! Surgeon General Julius Richmond said, "Those CDC workers were too young to know they couldn't do it."

The author goes through the campaign in Asia, Brazil, and East Africa to the messy aftermath: unintended consequences, such as the retention of smallpox virus in the United States and Russia because of mistrust. Even worse was the violation of trust by the Soviet Union, producing tons of smallpox virus, after eradication, for weapons of bioterrorism. This unbelievable betrayal was not the work of the Soviets we worked with and respected but of a leadership seeking power at any cost. While the virus should be destroyed, this act, plus the inability to account for all virus produced, is of far greater concern.

I recommend this book for the lessons of smallpox and other organisms of great threat. While I applaud the book, and admit the author may be correct, I would question some conclusions.

1.) Coercion did occur but reflects the frustration of workers, not scientific necessity. Surrounding recalcitrant people with vaccinated persons would stop an outbreak. 2.) The author repeatedly sees the program as the result of a liberal 1960s movement in the United States. Perhaps, but the origins may have been public demand for government action when the polio vaccine was shown to be effective in 1955. President Eisenhower asked Secretary Hobby (absolutely opposed to any socialized medicine) to develop a government plan to purchase vaccine. Vaccines went from the protection of individuals to the protection of individuals *and* society. Ten years later the same reasoning went global with U.S. support for smallpox eradication. 3.) The author sees variolation (p. 107) as "the most extreme challenge." While the practice could start smallpox outbreaks, our strength was finding and stopping outbreaks. Under rare circumstances the virus could be kept viable for long periods, but variolation could not have continued for long after an area became free of clinical cases. 4.) Despite concentration on smallpox, the measles program was very impactful and Gambia demonstrated the possibility of interrupting measles under African conditions. It was of short duration because USAID stopped funds. To withdraw measles funds after five years, before countries could arrange their own purchase of vaccine, was international

assistance malpractice! 5.) The author does not mention the July 1967 meeting of smallpox workers in Accra, Ghana, when surveillance/containment was first presented on the basis of experience in eastern Nigeria. 6.) Finally, one statement will be regarded as offensive to most smallpox workers. The author (p. 84) says, "Like the jet injectors used and the disease targeted by the program, its metrics bore the distinct imprint of liberal technocratic methods and objectives. Success would be measured not in the names of lives saved but in quantifiable tick marks of vaccinations administered."

These differences are few in number, and I endorse the book for providing a true service and great lessons on the need for wisdom on our approach to global health. We must be thoughtful about the future we create for others who have given us their proxy.

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Marc A. Asher. *Dogged Persistence: Harrington, Post-polio Scoliosis, and the Origin of Spine Instrumentation*. Traverse City, Mich.: Chandler Lake Books, 2015. xx + 395 pp. Ill. $30.00 (978-1-943338-01-6).

Marc Asher's *Dogged Persistence* is both a biography of Dr. Paul Harrington and a history of the development of his system of spine instrumentation designed to correct scoliosis. Harrington was one of the first surgeons in the post–World War II era to invent, manufacture, and use a system of metal rods to correct moderate to severe spinal curvatures. The existing system of using body casting to straighten the spine and maintain stability following a fusion of the vertebrae involved long periods of immobility and had a high failure rate. Harrington was convinced that he could design metal rods and connectors that could straighten and hold the spine in place with or without an accompanying fusion and without lengthy immobilization. Developing this procedure and instrumentation involved many years of trial and error and overcoming the resistance of his fellow orthopedic surgeons before spine correction using implanted instrumentation became commonplace in the 1960s.

Harrington was born in Kansas City, Kansas, in 1911. Educated in the public schools of Kansas City, he was also a standout athlete in basketball and track. He later graduated from the University of Kansas and its medical school. Following graduation, he entered an orthopedic residency in Kansas City with the ambition of becoming "the top in orthopedic surgery" (p. 38). During World War II he served as a surgeon in an evacuation hospital in North Africa and in Europe following D-Day. After the war, Harrington and his wife moved the family to Houston where Harrington joined the newly created Texas Medical Center. He remained in Houston for the rest of his career and died there on November 29, 1980.